

ABSTRACT OF THE DISCLOSURE

There is provided a practical magnetoresistance effect element which has an appropriate value of resistance, which can be sensitized and which has a small number of magnetic layers to be controlled, and a magnetic head and magnetic recording and/or reproducing system using the same. In a magnetoresistance effect element wherein a sense current is caused to flow in a direction perpendicular to the plane of the film, a resistance regulating layer is provided in at least one of a pinned layer, a free layer and an non-magnetic intermediate layer. The resistance regulating layer contains, as a principal component, an oxide, a nitride, a fluoride, a carbide or a boride. The resistance regulating layer may be a continuous film or may have pin holes. Thus, it is possible to provide a practical magnetoresistance effect element which has an appropriate value of resistance, which can be sensitized and which has a small number of magnetic layers, while effectively utilizing the scattering effect depending on spin.

0981987.101901
FOI 86-18660